Matthew Fuller

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

SEARCH REQUEST FORM

81

Requestor's Name: COOK

Serial Number: 09/875555

Date: 2/9/99 Phone: 308 4724 Art Unit: 1614 2807

Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevent citations, authors, keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevent claim(s).

Please search generic names, formulas of + gelling properties

Carbomer 934 P.

Lutrol F68 (poloxamer 188)

Lutrol F-127 (poloxamer 407

[redacted]

[redacted]

Pluronic F-127

Thanks

Rebecca

BEST AVAILABLE COPY

STAFF USE ONLY

Date completed: 2/18/99

Searcher: K. Fuller

Terminal time: 40

Elapsed time:

CPU time:

Total time: 50

Number of Searches:

Number of Databases:

Search Site

✓ STIC

CM-1

Pre-S

Type of Search

N.A. Sequence

A.A. Sequence

Structure

✓ Bibliographic

Vendors

IG

✓ STN

Dialog

APS

Geninfo

SDC

DARC/Questel

Other

PTO-1590 (9-90)

```
=> FILE REG

FILE 'REGISTRY' ENTERED AT 14:24:29 ON 18 FEB 1999
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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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STRUCTURE FILE UPDATES:  12 FEB  99  HIGHEST RN 219658-43-2
DICTIONARY FILE UPDATES: 15 FEB  99  HIGHEST RN 219658-43-2

TSCA INFORMATION NOW CURRENT THROUGH JUNE 29, 1998

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

=>  D HIS L4-


     (FILE 'REGISTRY' ENTERED AT 14:22:05 ON 18 FEB 1999)
                E CARBOMER 934P/CN
L4            1 S E3
                E LUTROL F68/CN
L5            1 S E2
                E LUTROL F 127/CN
L6            1 S E3
                E PLURONIC F 127/CN
L7            1 S E3
                SET COST OFF

     FILE 'REGISTRY' ENTERED AT 14:24:29 ON 18 FEB 1999

=> D L4;D L5; D L6;D L7


L4   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 1999 ACS
RN   57916-92-4  REGISTRY
CN   Carbomer 934P (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   Carbopol 934P
MF   Unspecified
CI   PMS, MAN
PCT  Manual registration
LC   STN Files:   BIOBUSINESS, BIOSIS, CA, CAPLUS, CHEMCATS, CIN, IFICDB,
       IFIPAT, IFIUDB, IPA, PROMT, TOXLINE, TOXLIT, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
             249 REFERENCES IN FILE CA (1967 TO DATE)
               5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
             249 REFERENCES IN FILE CAPLUS (1967 TO DATE)



L5   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 1999 ACS
RN   106392-12-5  REGISTRY
CN   Oxirane, methyl-, polymer with oxirane, block (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   Adeka Pluronic F 108
CN   Antarox B 25
CN   Antarox F 108
CN   Antarox F 88
CN   Antarox F 88FL
CN   Antarox P 104
CN   Arcol E 351
CN   B 053
```
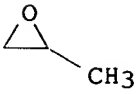

Same

CN Block polyethylene-polypropylene glycol
CN Block polyoxyethylene-polyoxypropylene
CN Breox BL 19-10
CN Cirrasol ALN-WS
CN Crisvon Assistor SD 14
CN CRL 1005
CN CRL 1605
CN CRL 8131
CN CRL 8142
CN Detalan
CN DO 97
CN Dowfax 30C05
CN ED 56
CN Emulgen PP 230
CN Epan 485
CN Epan 785
CN Epan U 108
CN Ethylene glycol-propylene glycol block copolymer
CN Ethylene oxide-propylene oxide block copolymer
CN Ethylene oxide-propylene oxide block copolymer dipropylene glycol ether
CN Ethylene oxide-propylene oxide block polymer
CN Ethylene oxide-propylene oxide copolymer, block
CN F 127
CN F 68
CN Flocor
CN Flocor (polyoxyalkylene)
CN Genapol PF 40
CN Hidropol 200
CN HOE-S 1816
CN HOE-S 1816/2
CN HOE-S 3510
CN Hydropol 200
CN Jaypol 410
CN L 101
CN L 121
CN L 141
CN L 2500
CN L 2500 (polyglycol)
CN LDO 97
CN Levenol DT 400
CN LF 120
CN Lionol PF 78
CN **Lutrol F 68**
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for DISPLAY
DR 11104-97-5, 163516-02-7, 121089-00-7, 96639-37-1, 96958-14-4, 99040-06-9, 106138-19-6, 113441-83-1, 115742-90-0, 108688-61-5, 108688-62-6, 37349-41-0, 70226-19-6, 72231-62-0, 77108-15-7, 80456-04-8, 144638-32-4, 83589-65-5, 86904-45-2, 106899-85-8, 107498-07-7, 108340-62-1, 188815-93-2, 211389-05-8
MF (C3 H6 O . C2 H4 O)x
CI PMS, COM
PCT Polyether, Polyether formed
SR CA
LC STN Files: ADISINSIGHT, AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DRUGNL, DRUGU, DRUGUPDATES, IPA, MEDLINE, PDLCOM*, PIRA, PHAR, PROMT, RTECS*, TOXLINE, TOXLIT, USAN, USPATFULL
(*File contains numerically searchable property data)

CM 1

CRN 75-56-9
CMF C3 H6 O



CM 2

CRN 75-21-8
CMF C2 H4 O

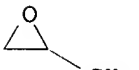
4068 REFERENCES IN FILE CA (1967 TO DATE)
470 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4087 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L6 ANSWER 1 OF 1 REGISTRY COPYRIGHT 1999 ACS
RN 106392-12-5 REGISTRY
CN Oxirane, methyl-, polymer with oxirane, block (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Adeka Pluronic F 108
CN Antarox B 25
CN Antarox F 108
CN Antarox F 88
CN Antarox F 88FL
CN Antarox P 104
CN Arcol E 351
CN B 053
CN Block polyethylene-polypropylene glycol
CN Block polyoxyethylene-polyoxypropylene
CN Breox BL 19-10
CN Cirrasol ALN-WS
CN Crisvon Assistor SD 14
CN CRL 1005
CN CRL 1605
CN CRL 8131
CN CRL 8142
CN Detalan
CN DO 97
CN Dowfax 30C05
CN ED 56
CN Emulgen PP 230
CN Epan 485
CN Epan 785
CN Epan U 108
CN Ethylene glycol-propylene glycol block copolymer
CN Ethylene oxide-propylene oxide block copolymer
CN Ethylene oxide-propylene oxide block copolymer dipropylene glycol ether
CN Ethylene oxide-propylene oxide block polymer
CN Ethylene oxide-propylene oxide copolymer, block
CN F 127
CN F 68
CN Flocor
CN Flocor (polyoxyalkylene)
CN Genapol PF 40
CN Hidropol 200

CN HOE-S 1816
CN HOE-S 1816/2
CN HOE-S 3510
CN Hydropol 200
CN Jaypol 410
CN L 101
CN L 121
CN L 141
CN L 2500
CN L 2500 (polyglycol)
CN LDO 97
CN Levenol DT 400
CN LF 120
CN Lionol PF 78
CN **Lutrol F 127**
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for DISPLAY
DR 11104-97-5, 163516-02-7, 121089-00-7, 96639-37-1, 96958-14-4, 99040-06-9, 106138-19-6, 113441-83-1, 115742-90-0, 108688-61-5, 108688-62-6, 37349-41-0, 70226-19-6, 72231-62-0, 77108-15-7, 80456-04-8, 144638-32-4, 83589-65-5, 86904-45-2, 106899-85-8, 107498-07-7, 108340-62-1, 188815-93-2, 211389-05-8
MF (C3 H6 O . C2 H4 O)x
CI PMS, COM
PCT Polyether, Polyether formed
SR CA
LC STN Files: ADISINSIGHT, AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DRUGNL, DRUGU, DRUGUPDATES, IPA, MEDLINE, PDLCOM*, PIRA, PHAR, PROMT, RTECS*, TOXLINE, TOXLIT, USAN, USPATFULL
(*File contains numerically searchable property data)

CM 1

CRN 75-56-9
CMF C3 H6 O



CM 2

CRN 75-21-8
CMF C2 H4 O

4068 REFERENCES IN FILE CA (1967 TO DATE)
470 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4087 REFERENCES IN FILE CAPLUS (1967 TO DATE)

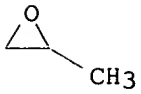
L7 ANSWER 1 OF 1 REGISTRY COPYRIGHT 1999 ACS
RN 106392-12-5 REGISTRY
CN Oxirane, methyl-, polymer with oxirane, block (9CI) (CA INDEX NAME)
OTHER NAMES:

CN Adeka Pluronic F 108
CN Antarox B 25
CN Antarox F 108
CN Antarox F 88
CN Antarox F 88FL
CN Antarox P 104
CN Arcol E 351
CN B 053
CN Block polyethylene-polypropylene glycol
CN Block polyoxyethylene-polyoxypropylene
CN Breox BL 19-10
CN Cirrasol ALN-WS
CN Crisvon Assistor SD 14
CN CRL 1005
CN CRL 1605
CN CRL 8131
CN CRL 8142
CN Detalan
CN DO 97
CN Dowfax 30C05
CN ED 56
CN Emulgen PP 230
CN Epan 485
CN Epan 785
CN Epan U 108
CN Ethylene glycol-propylene glycol block copolymer
CN Ethylene oxide-propylene oxide block copolymer
CN Ethylene oxide-propylene oxide block copolymer dipropylene glycol ether
CN Ethylene oxide-propylene oxide block polymer
CN Ethylene oxide-propylene oxide copolymer, block
CN F 127
CN F 68
CN Flocor
CN Flocor (polyoxyalkylene)
CN Genapol PF 40
CN Hidropol 200
CN HOE-S 1816
CN HOE-S 1816/2
CN HOE-S 3510
CN Hydropol 200
CN Jaypol 410
CN L 101
CN L 121
CN L 141
CN L 2500
CN L 2500 (polyglycol)
CN LDO 97
CN Levenol DT 400
CN LF 120
CN Lionol PF 78
CN **Pluronic F 127**
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for DISPLAY
DR 11104-97-5, 163516-02-7, 121089-00-7, 96639-37-1, 96958-14-4, 99040-06-9, 106138-19-6, 113441-83-1, 115742-90-0, 108688-61-5, 108688-62-6, 37349-41-0, 70226-19-6, 72231-62-0, 77108-15-7, 80456-04-8, 144638-32-4, 83589-65-5, 86904-45-2, 106899-85-8, 107498-07-7, 108340-62-1, 188815-93-2, 211389-05-8
MF (C3 H6 O . C2 H4 O)x
CI PMS, COM
PCT Polyether, Polyether formed
SR CA
LC STN Files: ADISINSIGHT, AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DRUGNL, DRUGU,

DRUGUPDATES, IPA, MEDLINE, PDLCOM*, PIRA, PHAR, PROMT, RTECS*, TOXLINE, TOXLIT, USAN, USPATFULL
(*File contains numerically searchable property data)

CM 1

CRN 75-56-9
CMF C3 H6 O



CM 2

CRN 75-21-8
CMF C2 H4 O

4068 REFERENCES IN FILE CA (1967 TO DATE)
470 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4087 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> FILE CHEMCATS

FILE 'CHEMCATS' ENTERED AT 14:29:57 ON 18 FEB 1999
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE LAST UPDATED 13 FEB 1999 (19990213/UP)

For details on recent updates in CHEMCATS, enter NEWS FILE at an arrow (=>) prompt. For the list of suppliers currently in the file, enter HELP SPAC, HELP SPDH, HELP SPIP, and HELP SPQZ. For the list of current catalogs, enter HELP CTAC, HELP CTDH, HELP CTIP and HELP CTQZ.

This database is provided on an "as is" basis. Please consult the suppliers for current information regarding pricing, regional availability, available quantities, purities, etc. THERE ARE NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED. ACS is not liable for any loss of profit, goodwill or any other damages arising out of the use of this database.

=> D HIS L8

(FILE 'REGISTRY' ENTERED AT 14:22:05 ON 18 FEB 1999)
SET COST OFF

FILE 'REGISTRY' ENTERED AT 14:24:29 ON 18 FEB 1999

FILE 'CHEMCATS' ENTERED AT 14:27:51 ON 18 FEB 1999
L8 13 S L4 OR L5 OR L6 OR L7

FILE 'CHEMCATS' ENTERED AT 14:29:57 ON 18 FEB 1999

=> D L18 1-13 PROP

L18 NOT FOUND
The L-number entered has not been defined in this session, or it has been deleted. To see the L-numbers currently defined in this session, enter DISPLAY HISTORY at an arrow prompt (=>).

=> D L8 1-13 PROP

L8 ANSWER 1 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:447013 CHEMCATS

L8 ANSWER 2 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:446788 CHEMCATS

L8 ANSWER 3 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:446785 CHEMCATS

L8 ANSWER 4 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:446784 CHEMCATS

L8 ANSWER 5 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:446783 CHEMCATS

L8 ANSWER 6 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:446782 CHEMCATS

L8 ANSWER 7 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:435222 CHEMCATS

L8 ANSWER 8 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:390809 CHEMCATS

L8 ANSWER 9 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:306435 CHEMCATS

L8 ANSWER 10 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:286685 CHEMCATS

L8 ANSWER 11 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:181147 CHEMCATS

PROPERTIES

Color : Colorless
Form : Liquid

L8 ANSWER 12 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:181144 CHEMCATS

PROPERTIES

Form : Liquid

L8 ANSWER 13 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:181140 CHEMCATS

PROPERTIES

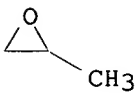
Color : Colorless
Form : Liquid

Sellers of 2 chemicals properties from them?

=> D L8 1-13 ALL

L8 ANSWER 1 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:447013 CHEMCATS
Catalog Name (CO): Bryant Laboratory Inc.
Publication Date (PD): 21 Apr 1998
Order Number (ON): P1608
Chemical Name (CN): POLOXAMER 331
CAS Registry No. (RN): **106392-12-5**
Structure :

CM 1



CM 2

PRICES

Quantity : 500 ML, Price: contact supplier
Quantity : 2.5 L, Price: contact supplier

COMPANY INFORMATION

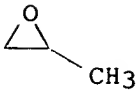
Bryant Laboratory, Inc.
1101 Fifth Street
Berkeley, CA, 94710
USA

Tel: 800-367-3141 or 510-526-3141

Fax: 510-528-2948

L8 ANSWER 2 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:446788 CHEMCATS
Catalog Name (CO): Bryant Laboratory Inc.
Publication Date (PD): 21 Apr 1998
Order Number (ON): P1172
Chemical Name (CN): PLURONIC F108
Grade (CN): USP
CAS Registry No. (RN): **106392-12-5**
Structure :

CM 1



CM 2

PRICES

Quantity : 500 GM, Price: contact supplier
Quantity : 2.5 KG, Price: contact supplier

COMPANY INFORMATION

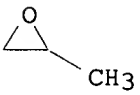
Bryant Laboratory, Inc.
1101 Fifth Street
Berkeley, CA, 94710
USA

Tel: 800-367-3141 or 510-526-3141

Fax: 510-528-2948

L8 ANSWER 3 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:446785 CHEMCATS
Catalog Name (CO): Bryant Laboratory Inc.
Publication Date (PD): 21 Apr 1998
Order Number (ON): P1169
Chemical Name (CN): PLURONIC F68
Grade (CN): USP
CAS Registry No. (RN): **106392-12-5**
Structure :

CM 1



CM 2

PRICES

Quantity : 500 GM, Price: contact supplier
KATHLEEN FULLER STIC LIBRARY 308-4290

Quantity : 2.5 KG, Price: contact supplier

COMPANY INFORMATION

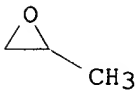
Bryant Laboratory, Inc.
1101 Fifth Street
Berkeley, CA, 94710
USA

Tel: 800-367-3141 or 510-526-3141

Fax: 510-528-2948

L8 ANSWER 4 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:446784 CHEMCATS
Catalog Name (CO): Bryant Laboratory Inc.
Publication Date (PD): 21 Apr 1998
Order Number (ON): P1168
Chemical Name (CN): PLURONIC L44
CAS Registry No. (RN): **106392-12-5**
Structure :

CM 1



CM 2

PRICES

Quantity : 500 GM, Price: contact supplier
Quantity : 500 ML, Price: contact supplier
Quantity : 2.5 L, Price: contact supplier

COMPANY INFORMATION

Bryant Laboratory, Inc.
1101 Fifth Street
Berkeley, CA, 94710
USA

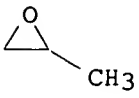
Tel: 800-367-3141 or 510-526-3141

Fax: 510-528-2948

L8 ANSWER 5 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:446783 CHEMCATS
Catalog Name (CO): Bryant Laboratory Inc.
Publication Date (PD): 21 Apr 1998
Order Number (ON): P1167
Chemical Name (CN): PLURONIC F87

Grade (CN): USP
CAS Registry No. (RN): **106392-12-5**
Structure :

CM 1



CM 2

PRICES

Quantity : 500 GM, Price: contact supplier
Quantity : 2.5 KG, Price: contact supplier

COMPANY INFORMATION

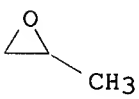
Bryant Laboratory, Inc.
1101 Fifth Street
Berkeley, CA, 94710
USA

Tel: 800-367-3141 or 510-526-3141

Fax: 510-528-2948

L8 ANSWER 6 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:446782 CHEMCATS
Catalog Name (CO): Bryant Laboratory Inc.
Publication Date (PD): 21 Apr 1998
Order Number (ON): P1166
Chemical Name (CN): PLURONIC F127
Grade (CN): USP
CAS Registry No. (RN): **106392-12-5**
Structure :

CM 1



CM 2

PRICES

Quantity : 500 GM, Price: contact supplier
Quantity : 2.5 KG, Price: contact supplier

COMPANY INFORMATION

Bryant Laboratory, Inc.
1101 Fifth Street
Berkeley, CA, 94710
USA

Tel: 800-367-3141 or 510-526-3141

Fax: 510-528-2948

L8 ANSWER 7 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:435222 CHEMCATS
Catalog Name (CO): Bryant Laboratory Inc.
Publication Date (PD): 21 Apr 1998
Order Number (ON): CA184
Chemical Name (CN): CARBOPOL 934P
Grade (CN): USP
CAS Registry No. (RN): **57916-92-4**
Structure :

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

PRICES

Quantity : 500 GM, Price: contact supplier
Quantity : 2.5 KG, Price: contact supplier

COMPANY INFORMATION

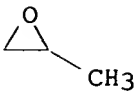
Bryant Laboratory, Inc.
1101 Fifth Street
Berkeley, CA, 94710
USA

Tel: 800-367-3141 or 510-526-3141

Fax: 510-528-2948

L8 ANSWER 8 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:390809 CHEMCATS
Catalog Name (CO): Monomer-Polymer & Dajac Laboratories, Inc.
Publication Date (PD): 1 Mar 1998
Order Number (ON): 9785
Chemical Name (CN): Poly(ethylene oxide)/Poly(propylene oxide) Block Copolymer
CAS Registry No. (RN): **106392-12-5**
Structure :

CM 1



CM 2

PRICES

Quantity : N/A, Price: Available on request

COMPANY INFORMATION

Monomer-Polymer & Dajac Laboratories, Inc.
1675 Bustleton Pike
Feasterville, PA, 19053
USA

To Order

In placing orders please identify chemicals both by name and catalog number. Orders can be placed by dialing our order desk at:

TELEPHONE: 215-364-1155
FAX: 215-364-1583

We do not require written confirmation of telephone orders. However, if this is sent, please mark "CONFIRMATION OF TELEPHONE ORDER - DO NOT DUPLICATE".

PRICES, TERMS, AND CONDITIONS
CONDITIONS OF SALE

The goods sold hereunder have been carefully made, and while if found defective in manufacture, labeling or packaging they will be replaced. Seller makes no warranty of any kind, expressed or implied, and Buyer assumes all risk and liability for results obtained by the use of the goods covered by this order, whether used singly or in combination with other material. If Seller makes or has made representations or recommendations as to the use of the goods, the reliance or acting thereon is the sole responsibility of Buyer.

No claim of any kind, as to goods delivered or for non-delivery of goods, shall be greater in amount than the purchase price of the goods in respect of which such damages are claimed, or greater in amount than the purchase price of such portion of the goods as are not replaced by Seller, whichever is less, and without limiting the generality of the foregoing, Seller shall not be liable for any consequential damages or loss of Buyer's prospective profits on the goods or for any damage suffered by Buyer as a result of Buyer's use of said goods. Failure to give notice of claim within fourteen days from date of delivery shall constitute a waiver by Buyer of all claims in respect of such goods. Goods shall not be returned to Seller without Seller's permission.

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We will endeavor to maintain the prices listed in the printed catalog. In the case of price changes, we will first contact the customer if the change is more than 20% above the listed price. All orders are shipped FOB, Feasterville, PA. In all cases, terms are net 30 days except by prior agreement. Interest at 1.5% per month is charged on delinquent accounts. Due to the cost of processing orders, we have a minimum charge of $25.00 per order. Customers will be billed a $10.00 handling charge for items ordered in quantities smaller than the standard package sizes. The packaging of hazardous materials requiring special packaging will be billed a nominal charge.

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Orders of ten times a given catalog size will automatically receive a 10% discount. Orders of twenty times or more will receive a 20% discount. Numerous catalog items are available in large quantities. Prices will be given out upon request. In many cases, prices for larger sizes such as 5-gallon
pails and 55 gallon drums have already been established. Many of our chemicals are also available in 1 mole sizes or in special quantities designated by you in order to minimize your disposal problems.

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CUSTOM SYNTHESIS AND BULK REQUESTS

If the chemical you require is not listed in this catalog, or if you require quantities much larger than the sizes listed, please telephone 215-364-1155 or write to us outlining your needs. We also accept FAX requests at 215-364-1583. We are always pleased to search our extensive process files or to quote on custom synthesis and contract research. All requests will be answered both quickly and competently.

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TOXIC SUBSTANCES CONTROL ACT

We do not warrant that materials in this catalog are (or will be) listed in the Toxic Substances Control Act Chemical Substances Inventory compiled and published by the U.S. Environmental Protection Agency. Consistent with the intent of this catalog, we assume that you will use materials purchased hereunder for research and development purposes within the meaning of the Act, or will assure that any other use is in full compliance with the Act and its implementing regulations.

HAZARDS AND MATERIAL SAFETY DATA SHEETS
We supply MSDS's to our customers for our chemicals as required by the OSHA Hazard Communication Standard and many state laws. Many organic chemicals are made in research quantities only; new chemicals are continually added to our product line as well as the continual discovery of new uses for chemical products. Under these conditions, it is neither practical nor possible to obtain complete physical and toxicological data or to predict the extent and type of hazard under all conditions of use. Therefore, conclusions regarding hazards may sometimes have to be drawn by inference from other compounds similar in structure. The final decision concerning safe handling of any chemical is the responsibility of the customer. We are able to arrange special handling package sizes at your request in order to alleviate your disposal requirements.

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a license to operate under or a recommendation to practice or infringe any patent of ours or others.

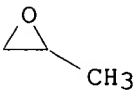
All of our chemicals are sold for research purposes. They are not intended or suitable for use as drugs, cosmetics, food additives, agricultural or pesticidal products or as household chemicals.

USE OF THIS CATALOG

Functional groups such as "Allyl" and "Vinyl" usually precede other substituents
in the naming and cataloguing of an item.

L8 ANSWER 9 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:306435 CHEMCATS
Catalog Name (CO): Spectrum Quality Products, Inc.
Publication Date (PD): 28 Jan 1997
Order Number (ON): P1608
Chemical Name (CN): Poloxamer 331
CAS Registry No. (RN): **106392-12-5**
Structure :

CM 1



CM 2

PRICES

Quantity : 500 ml, Price: 17.50
Quantity : 2.5 L, Price: 59.80

COMPANY INFORMATION

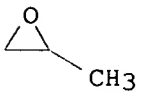
Spectrum Quality Products, Inc.
14422 South San Pedro St.
Gardena, CA, 90248
USA

Tel: 310-516-8000 or 800-772-8786
Fax: 310-516-7512 or 800-525-2299
E-Mail: chemicals@spectrumchemical.com
Internet: www.spectrumchemical.com

L8 ANSWER 10 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:286685 CHEMCATS
Catalog Name (CO): PPG Specialty Chemicals
Publication Date (PD): 30 Jan 1997
Order Number (ON): 003
Chemical Name (CN): Macol 27 Poloxamer 407

CAS Registry No. (RN): **106392-12-5**
Structure :

CM 1



CM 2

PRICES

Quantity : various, Price: contact supplier

MISCELLANEOUS

Application : Personal Care

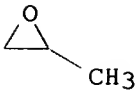
COMPANY INFORMATION

PPG Industries, Inc.
Specialty Chemicals, Chemicals Group
3938 Porett Drive
Gurnee, IL, 60031
USA

For Orders & Customer Service:
Telephone: 1-800-323-0856
In Illinois: (847)-244-3410
For Product Information:
Telephone: 1-800-552-1912
In Illinois: (847) 244-3410

L8 ANSWER 11 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:181147 CHEMCATS
Catalog Name (CO): Chem Service, Inc.
Publication Date (PD): 16 Jun 1994
Order Number (ON): S-373
Chemical Name (CN): POP 2250/ 70% EtO
Grade (CN): TECH
Synonym (CN): Synperonic PE 39/70
CAS Registry No. (RN): **106392-12-5**
Supplementary Term (ST): Organic
Structure :

CM 1



CM 2

PROPERTIES

Color : Colorless
Form : Liquid

PRICES

Quantity : 10gm, Price: 8.50

COMPANY INFORMATION

Chem Service
P.O. Box 3108
660 Tower Lane
West Chester, PA, 19381
USA

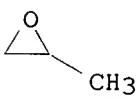
Phone: (800) 452-9994

Phone: (610) 692-3026

Fax: (610) 692-8729

L8 ANSWER 12 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:181144 CHEMCATS
Catalog Name (CO): Chem Service, Inc.
Publication Date (PD): 16 Jun 1994
Order Number (ON): S-370
Chemical Name (CN): POP 1750/ 40% EtO
Grade (CN): TECH
Synonym (CN): Synperonic PE 30/40
CAS Registry No. (RN): **106392-12-5**
Supplementary Term (ST): Organic
Structure :

CM 1



CM 2

PROPERTIES

Form : Liquid

PRICES

Quantity : 10gm, Price: 8.50

COMPANY INFORMATION

Chem Service
P.O. Box 3108
660 Tower Lane
West Chester, PA, 19381
USA

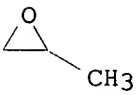
Phone: (800) 452-9994

Phone: (610) 692-3026

Fax: (610) 692-8729

L8 ANSWER 13 OF 13 CHEMCATS COPYRIGHT 1999 ACS
Accession No. (AN): 1998:181140 CHEMCATS
Catalog Name (CO): Chem Service, Inc.
Publication Date (PD): 16 Jun 1994
Order Number (ON): S-367
Chemical Name (CN): POP 1200/ 40% EtO
Grade (CN): TECH
Synonym (CN): Pluronic L-44
CAS Registry No. (RN): **106392-12-5**
Supplementary Term (ST): Organic
Structure :

CM 1



CM 2

PROPERTIES

Color : Colorless
Form : Liquid

PRICES

Quantity : 10gm, Price: 8.50

COMPANY INFORMATION

Chem Service
P.O. Box 3108
660 Tower Lane
West Chester, PA, 19381
USA

Phone: (800) 452-9994

Phone: (610) 692-3026

Fax: (610) 692-8729

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FILE LAST UPDATED: 18 Feb 1999 (19990218/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L4	1	SEA FILE=REGISTRY ABB=ON	"CARBOMER 934P"/CN
L5	1	SEA FILE=REGISTRY ABB=ON	"LUTROL F 68"/CN
L6	1	SEA FILE=REGISTRY ABB=ON	"LUTROL F 127"/CN
L7	1	SEA FILE=REGISTRY ABB=ON	"PLURONIC F 127"/CN
L9	4358	SEA FILE=HCAPLUS ABB=ON	L4 OR L5 OR L6 OR L7
L11	13	SEA FILE=HCAPLUS ABB=ON	L9(L)(GEL?(5A)PROPER?)
L12	660	SEA FILE=HCAPLUS ABB=ON	L9(L)PRP/RL
L13	61	SEA FILE=HCAPLUS ABB=ON	L12(L)GEL?
L14	67	SEA FILE=HCAPLUS ABB=ON	L11 OR L13
L15	57	SEA FILE=HCAPLUS ABB=ON	L14 AND GEL?/TI
L16	29	SEA FILE=HCAPLUS ABB=ON	L15 AND PHARMACEU?/SC,SX,AB,BI
L17	22	SEA FILE=HCAPLUS ABB=ON	L15 AND THU/RL
L19	26	SEA FILE=HCAPLUS ABB=ON	L14 AND GELATION/IT
L20	6	SEA FILE=HCAPLUS ABB=ON	(L16 OR L17) AND L19
L21	8	SEA FILE=HCAPLUS ABB=ON	L15 AND PROPER?/TI
L22	11	SEA FILE=HCAPLUS ABB=ON	L14 AND L4
L27	8	SEA FILE=HCAPLUS ABB=ON	L22 AND (L16 OR L17 OR L19)
L28	18	SEA FILE=HCAPLUS ABB=ON	L20 OR L21 OR L27
L29	1	SEA FILE=HCAPLUS ABB=ON	L14 AND REVIEW?
L30	19	SEA FILE=HCAPLUS ABB=ON	L28 OR L29

=> D L30 1-19 ALL

L30 ANSWER 1 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1998:481611 HCAPLUS
DN 129:245947
TI Evaluation of mucoadhesion for two polyelectrolyte **gels** in simulated physiological conditions, using a rheological method
AU Edsman, Katarina; Hagerstrom, Helene; Paulsson, Mattias
CS Department of Pharmacy, Pharmaceutics, Uppsala University, Uppsala, 751 23, Swed.
SO Annu. Trans. Nord. Rheol. Soc. (1998), 6, 43-49
CODEN: ATNSFL
PB Nordic Rheology Society
DT Journal
LA English
CC 37-5 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, **63**
AB A rheol. method was used to evaluate the mucoadhesion if two ion-sensitive polymers, Carbopol 934P and Kelcogel F (Gelrite) in an environment similar to that of tear fluid; the method and the interpretation of the data are discussed. The method is mostly suited for evaluating mucoadhesion of polymers that form real gels, since the elastic modulus is const. in the whole frequency range. Polymer solns., on the contrary, show highly frequency dependent G'. Selection of frequency consequently has a very large influence on the size of the interaction term. Furthermore, the size of the interaction term is highly affected by other exptl. conditions such as concn. of polymer, mucin in the mixt., presence of ions, etc. This makes it difficult to grade the mucoadhesiveness of polymers in a simple way by this method. Gelrite shows mucoadhesive properties in ultrapure water and at low concns. of Gelrite in simulated tear fluid. Carbopol 934 does not show any mucoadhesion in simulated tear fluid using this method. The results are discussed with respect to use of the polymers in gels for ocular administration.
ST mucoadhesion polyelectrolyte gel simulated tear fluid; Gelrite mucoadhesion tear fluid; Carbopol mucoadhesion tear fluid; ocular administration polymer mucoadhesion evaluation
IT Adhesion (biological)
(muco-; rheol. evaluation of mucoadhesion of polyelectrolyte gels in simulated tear fluid)
IT Gels (drug delivery systems)
Ophthalmic drug delivery systems
Polyelectrolytes
Young's modulus
(rheol. evaluation of mucoadhesion of polyelectrolyte gels in simulated tear fluid)
IT Mucins
RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); BIOL (Biological study); PROC (Process)
(rheol. evaluation of mucoadhesion of polyelectrolyte gels in simulated tear fluid)
IT Tear (ocular fluid)
(simulated; rheol. evaluation of mucoadhesion of polyelectrolyte gels in simulated tear fluid)
IT 79-10-7D, Acrylic acid, polymers with polyallyl sucrose
RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); BIOL (Biological study); PROC (Process)
(crosslinked; rheol. evaluation of mucoadhesion of polyelectrolyte gels in simulated tear fluid)
IT 9005-32-7, Alginic acid
RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); BIOL (Biological study); PROC

(Process)
(in model systems; rheol. evaluation of mucoadhesion of polyelectrolyte gels in simulated tear fluid)

IT 9004-32-4, Blanose 7HF
RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); BIOL (Biological study); PROC (Process)
(mixt. of different mol. wts. as model system; rheol. evaluation of mucoadhesion of polyelectrolyte gels in simulated tear fluid)

IT 213250-84-1
RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); BIOL (Biological study); PROC (Process)
(model system; rheol. evaluation of mucoadhesion of polyelectrolyte gels in simulated tear fluid)

IT **57916-92-4**, Carbopol 934P 71010-52-1, Kelcogel F
RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); **PRP (Properties)**; BIOL (Biological study); PROC (Process)
(rheol. evaluation of mucoadhesion of polyelectrolyte **gels** in simulated tear fluid)

L30 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1998:426125 HCAPLUS
DN 129:136677
TI Gelation and dynamics of PEO-PPO-PEO copolymers in water
AU Hvidt, S.
CS Department of Chemistry, Roskilde University, Roskilde, DK-4000, Den.
SO Wiley Polym. Networks Group Rev. Ser. (1998), 1(Chemical and Physical Networks), 63-77
CODEN: WPNSFV
PB John Wiley & Sons Ltd.
DT Journal; General Review
LA English
CC 36-0 (Physical Properties of Synthetic High Polymers)
AB A **review** with 37 refs. Some triblock copolymers of ethylene oxide and propylene oxide form thermoreversible solid-like gels in aq. solns. Rheol. techniques have been used to characterize the gelation process and investigate the gel properties. A hard gel with elastic moduli above 104 Pa consists of spherical micelles arranged in a cubic lattice, and a softer gel with moduli below 50 Pa consists of rod-like micelles. The frequency dependencies of the shear moduli show that the systems are phys. gels with very long relaxation times. Various models for gelation are discussed and compared with exptl. results. Thermodn. data suggest that micellization is governed primarily by hydrophobic interactions between the PPO block and water. Unimers and micelles are in a dynamic equil. and the relaxation time for motions has been estd. from oscillatory bulk measurements to be close to 0.5 .mu.s at 20 .degree.C.
ST **review** oxirane methyloxirane copolymer soln; block polyoxalkylene gelation dynamics **review**
IT Gelation
Gels
Micelles
Micellization
(gelation and dynamics of triblock ethylene oxide-propylene copolymers in water)

IT Polyoxyalkylenes, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(gelation and dynamics of triblock ethylene oxide-propylene copolymers in water)

IT **106392-12-5**, Oxirane methyloxirane block copolymer
RL: PEP (Physical, engineering or chemical process); **PRP (Properties)**; PROC (Process)

(**gelation** and dynamics of triblock ethylene oxide-propylene copolymers in water)

L30 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1998:120246 HCAPLUS
DN 128:208871
TI **Gelation** of pluronic F127-polyethylene glycol mixtures: relationship to PEG molecular weight
AU Pandit, Nivedita K.; McGowan, Richard
CS Coll. Pharm. Health Sci., Drake Univ., Des Moines, IA, 50311, USA
SO Drug Dev. Ind. Pharm. (1998), 24(2), 183-186
CODEN: DDIPD8; ISSN: 0363-9045
PB Marcel Dekker, Inc.
DT Journal
LA English
CC 63-7 (**Pharmaceuticals**)
AB The formation and melting of Pluronic F127 gels in the presence of polyethylene glycols (PEGs) has been studied. All the PEGs studied raised T1 and lowered T2 of 20% F127 gels; this effect was proportional to PEG concn. At a certain crit. "no-gel" concn. of PEG (Cng), F127 lost its ability to form gels. Cng was found to be inversely proportional to PEG mol. wt. An empirical relationship between Cng and PEG mol. wt. was obtained which can be used to predict effects of PEGs of any mol. wt. on F127 gelation.
ST gelation pluronic F127 polyethylene glycol
IT **Gelation**
Gels (drug delivery systems)
(**gelation** of pluronic F127 polyethylene glycol mixts.)
IT Polyoxyalkylenes, biological studies
RL: PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(**gelation** of pluronic F127 polyethylene glycol mixts.)
IT 25322-68-3, Polyethylene glycol **106392-12-5**, Pluronic F127
RL: **PRP (Properties)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(**gelation** of pluronic F127 polyethylene glycol mixts.)

L30 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1998:70411 HCAPLUS
DN 128:184575
TI Diffusion studies of methotrexate in Carbopol and Poloxamer **gels**
AU Lu, Guangwei; Jun, H. Won
CS College of Pharmacy, Department of Pharmaceutics, The University of Georgia, Athens, GA, 30602, USA
SO Int. J. Pharm. (1998), 160(1), 1-9
CODEN: IJPHDE; ISSN: 0378-5173
PB Elsevier Science B.V.
DT Journal
LA English
CC 63-5 (**Pharmaceuticals**)
AB The diffusion properties of methotrexate (MTX) in 2 hydrogels, Carbopol 934 (Carbopol) and Poloxamer 407 (PF-127), were compared with those in PEG 1500 and white petrolatum ointments in order to evaluate various factors governing the diffusion of MTX in different semisolid vehicles. A new membraneless method, which employed an MTX gel as the donor phase, was used for the measurement of the diffusivity of MTX in the vehicles. The flux of MTX in the hydrogels was at least 20-fold faster than those found in the ointments. The diffusion coeffs. (D) of MTX were 3.58 .times. 10-6 cm2/s in the 2% Carbopol gel and 1.03 .times. 10-6 cm2/s in the 25 PF-127 gel at 34.degree., despite similar bulk viscosities of the 2 gels. The activation energies for the diffusion of MTX in the Carbopol and PF-127 gels were 6.13 kcal/mol and 5.56 kcal/mol, resp., which were in the same order of magnitude as the diffusion of the small mols. in water, indicating that microviscosity rather than bulk viscosity of the gel was

primarily responsible for the diffusion of MTX in the gels. D values of MTX in the PF-127 gel were significantly accelerated at higher temps., despite increased bulk viscosity of the gels due to the reverse thermal gelation property of PF-127. The diffusivity of MTX was the inverse function of polymer concn., over the range of 20-30 of PF-127 and 1-3 of Carbopol at 34.degree.. Significant effects of pH and drug concn. on the diffusivity of MTX in the Carbopol gels were obsd., while no such effects were found in the PF-127 gels.

ST hydrogel methotrexate diffusion; Carbopol hydrogel methotrexate diffusion; Poloxamer hydrogel methotrexate diffusion

IT Diffusion
Gelation
Hydrogels (drug delivery systems)
Membranes (biological)
Ointments (drug delivery systems)
Viscosity
pH
(diffusion of methotrexate in Carbopol and Poloxamer gels)

IT Polymers, biological studies
RL: PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(diffusion of methotrexate in Carbopol and Poloxamer gels)

IT 59-05-2, Methotrexate
RL: PEP (Physical, engineering or chemical process); PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); PROC (Process); USES (Uses)
(diffusion of methotrexate in Carbopol and Poloxamer gels)

IT 9007-16-3, Carbopol 934 **106392-12-5**, Poloxamer 407
RL: **PRP (Properties)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(diffusion of methotrexate in Carbopol and Poloxamer **gels**)

L30 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1998:2180 HCAPLUS
DN 128:93066
TI Thermorheologic **properties** of aqueous solutions and **gels** of Poloxamer 407
AU Cho, Cheong-Weon; Shin, Sang-Chul; Oh, In-Joon
CS College of Pharmacy, Chonnam National University, Kwangju, 500-757, S. Korea
SO Drug Dev. Ind. Pharm. (1997), 23(12), 1227-1232
CODEN: DDIPD8; ISSN: 0363-9045
PB Marcel Dekker, Inc.
DT Journal
LA English
CC 63-5 (Pharmaceuticals)
AB A rheol. study of Poloxamer 407 aq. soln. of 10-25% (wt./wt.) concns. was carried out at temps. ranging from 27 to 45.degree. and at various shear rates. An exponential relationship was found between viscosity and temp., with curve slopes dependant upon Ploxamer concn. The viscosity of 25% Poloxamer 407 aq. soln. showed a Newtonian fluid at 4.degree. and linearly increased on increasing temp. The viscosity of 25% Poloxamer 407 aq. soln. was sharply increased at about 12.degree. and maintained highly const. During such a desolvation process, the closer approach of polymer chains, which gave rise to an increase in the no. of interactions among the chains, gave an increase in the soln. viscosity with temp. The gelling concn. was examd. using an interfacial tensiometer. The results showed that the first inflection point appeared at the 0.003% concn. and the second point appeared at the 17.5% concn. It implied that Poloxamer solns. formed monomol. micelles at low concn.; as the concn. was increased, multimol. aggregates were formed.

ST rheol Poloxamer temp soln gel

IT Gels (drug delivery systems)
Interfacial tension

Micelles
Shear stress
Viscosity
(thermorheol. properties of aq. solns. and gels of Poloxamer 407)
IT **106392-12-5**, Poloxamer 407
RL: **PRP (Properties)**; THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(thermorheol. **properties** of aq. solns. and **gels** of Poloxamer 407)

L30 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1997:395406 HCAPLUS
DN 127:85949
TI Investigation of the **gel** formation of phospholipid-stabilized solid lipid nanoparticles
AU Westesen, Kirsten; Siekmann, Britta
CS Institute Pharmaceutical Technology, Friedrich Schiller Univ., Jena, D-07743, Germany
SO Int. J. Pharm. (1997), 151(1), 35-45
CODEN: IJPHDE; ISSN: 0378-5173
PB Elsevier
DT Journal
LA English
CC 63-5 (**Pharmaceuticals**)
AB Despite the obvious similarities between colloidal lipid suspensions (solid lipid nanoparticles) and lipid o/q emulsions regarding the chem. compn. and the prepn. method, there are basic differences in the physicochem. behavior of these systems. Phospholipid stabilized tripalmitate suspensions with a compn. similar to com. lipid emulsions for parenteral nutrition tend to form semi-solid ointment-like gels. Gel formation can be attributed to the recrystn. of melt-homogenized tripalmitate. As obsd. by transmission electron microscopy, recrystn. is assocd. with an increase in specific interfacial area due to the formation of anisometrical, platelet-like colloidal crystals with structured surfaces. Due to the limited mobility of phospholipid mols. in excess which form predominantly vesicles in the aq. phase these emulsifiers are not able to immediately cover the newly created interfaces during platelet formation in an efficient way. Phospholipid mols. seem to be preferably assocd. with specific crystal interfaces during recrystn. causing variations in polarity and at./mol. order of different nanocrystal faces. Crystal interfaces with low concns. of adsorbed emulsifier mols. represent preferred sites of particle aggregation over which gel formation can proceed. Gel formation can be prevented by the addn. of co-emulsifying agents to the aq. phase provided the concn. of co-surfactant is sufficiently high to constitute a reservoir of mols. immediately available for interfacial stabilization during recrystn. Moreover, the co-emulsifier should preferably adsorb on crystal interfaces not or only incompletely covered by phospholipids.
ST gel formation phospholipid stabilized nanoparticle
IT **Gelation**
Particle size
Zeta potential
(gel formation of phospholipid-stabilized solid lipid nanoparticles)
IT Lecithins
Nanoparticles (drug delivery systems)
Phosphatidylcholines, biological studies
Phospholipids, biological studies
RL: PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(gel formation of phospholipid-stabilized solid lipid nanoparticles)
IT 25301-02-4 **106392-12-5**, Pluronic F127 110617-70-4
RL: MOA (Modifier or additive use); **PRP (Properties)**; USES (Uses)
(**gel** formation of phospholipid-stabilized solid lipid

nanoparticles)
IT 555-44-2, Dynasan 116
RL: PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(gel formation of phospholipid-stabilized solid lipid nanoparticles)

L30 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1997:364636 HCAPLUS
DN 127:39639
TI Disintegration and **gel** forming behavior of Carbomer and its sodium salt used as excipients for direct compression
AU Kaiho, F.; Luessen, H.L.; Lehr, C.-M.; Verhoef, J.C.; Junginger, H.E.
CS Faculty of Pharmaceutical Sciences, Science University of Tokyo, Tokyo, 162, Japan
SO S.T.P. Pharma Sci. (1996), 6(6), 385-389
CODEN: STSSE5; ISSN: 1157-1489
PB Editions de Sante
DT Journal
LA English
CC 63-5 (**Pharmaceuticals**)
AB Poly(acrylic acid) polymers such as Carbomer (Carbopol 934P, C934P) and its sodium salt (Carbopol EX161, NaC934P) were studied as excipients for direct compression, with the aim of prepg. tablet formulations with fast disintegration of the poly(acrylates) and rapid drug release characteristics. Erythrosin was included in the tablets as a hydrophilic model drug. Tablets composed of C934P and the disintegrant sodium starch glycolate up to 50% showed a very slow disintegration time (about 5 h) and low dissoln. of erythrosin (13% after 1.5 h). Replacement of C934P by NaC934P resulted in a 3-fold redn. of the disintegration time and almost total release of erythrosin after 2 h, due to the higher soly. of NaC934P as compared to C934P. Tablets consisting of the freeze-dried sodium salt of Carbomer (FNaC934P) with 50% starch glycolate showed a rapid disintegration time of 24 min and complete dissoln. of erythrosin within 30 min. For these FNaC934P tablet formulations, no substantial differences were obsd. between sodium starch glycolate, PVP or sodium croscarmellose as disintegrants. The poly(acrylate) FNaC934P is a suitable excipient for direct compression of tablets with rapidly disintegrating and drug releasing properties, and may be useful in formulations intended to deactivate intestinal luminal protease activities.
ST disintegration Carbomer excipient direct compression tablet
IT Tablets (drug delivery systems)
(disintegration and gel forming behavior of Carbomer and salt as excipients for direct compression)
IT **57916-92-4**, Carbopol 934P 102640-11-9, Carbopol EX161
RL: **PRP (Properties)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(disintegration and **gel** forming behavior of Carbomer and salt as excipients for direct compression)
IT 9063-38-1, Sodium starch glycolate 74811-65-7, Sodium croscarmellose
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(disintegration and gel forming behavior of Carbomer and salt as excipients for direct compression)

L30 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1997:194533 HCAPLUS
DN 126:229560
TI Investigation of the effect of .beta.-CD on in vitro release of ketoconazole from different **gel** bases
AU Celebi, N.; Gul, Z.I.; Ocak, F.; Yildiz, S.; Acarturk, F.
CS Dept. of Pharm. Tech., Fac. of Pharm., Univ. of Gazi, Etiler-Ankara, 06330, Turk.
SO Proc. Int. Symp. Cyclodextrins, 8th (1996), 461-464. Editor(s): Szejtli, J.; Szente, L. Publisher: Kluwer, Dordrecht, Neth.

CODEN: 64CDAL
DT Conference
LA English
CC 63-6 (**Pharmaceuticals**)
Section cross-reference(s): 1
AB The solid complex of ketoconazole (KET) with .beta.-CD in a molar ratio of 1:1 was prepd. by kneading method. The kneaded mixt. of KET with .beta.-CD in solid state was confirmed by DSC and x-ray diffractometry techniques. The release of KET and its kneaded and phys. mixts. from gel bases was studied using a modified Franz diffusion cell with a cellophane membrane in pH 5.0 buffer soln. at 37.degree.. In addn., release characteristics were compared with com. products. The antimycotic activity of KET and its mixts. was investigated by inhibition zone measurements of Candida albicans. The release of KET from gel bases was significantly increased by the KET/.beta.-CD complexation by kneading method. Microbiol. tests showed that KET/.beta.-CD complex was much more effective than that of phys. mixt., ketoconazole and .beta.-CD alone against C. albicans ATCC 10231.
ST ketoconazole cyclodextrin release gel; antimycotic ketoconazole cyclodextrin gel
IT Dissolution rate
Fungicides
Gels (drug delivery systems)
(cyclodextrin effect on release of ketoconazole from gel bases)
IT 65277-42-1, Ketoconazole
RL: BAC (Biological activity or effector, except adverse); PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(cyclodextrin effect on release of ketoconazole from gel bases)
IT 184417-15-0P
RL: PRP (Properties); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(cyclodextrin effect on release of ketoconazole from gel bases)
IT 56-81-5, 1,2,3-Propanetriol, biological studies 57-55-6, 1,2-Propanediol, biological studies 7585-39-9, .beta.-Cyclodextrin 9002-89-5, PVA 9003-97-8, NoveonAA1 **57916-92-4**, CArbopol 934P 161279-68-1, CArbopol 971P
RL: **PRP (Properties)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(cyclodextrin effect on release of ketoconazole from **gel** bases)

L30 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1996:750666 HCAPLUS
DN 126:135516
TI Loss of **gelation** ability of Pluronic F127 in the presence of some salts
AU Pandit, Nivedita K.; Kisaka, Justin
CS College of Pharmacy and Health Sciences, Drake University, Des Moines, IA, 50311, USA
SO Int. J. Pharm. (1996), 145(1,2), 129-136
CODEN: IJPHDE; ISSN: 0378-5173
PB Elsevier
DT Journal
LA English
CC 63-5 (**Pharmaceuticals**)
AB In this investigation, the authors showed that certain salts with multivalent anions, at characteristic concns., prevent Pluronic F127 solns. from forming gels. This was done by measuring the gel formation (T1), gel melting (T2) and cloud point (Tcp) transitions of 20% Pluronic F127 gels in the presence of various such salts. All the salts studied lower all 3 transition temps. The degree of lowering is proportional to salt concn. and can be ascribed to salting-out effects. Both the cation and anion appear to influence T1, while T2 and Tcp are predominantly

influenced by the salt anion. T1 is lowered because salts decrease the crit. micelle concn. (cmc) of F127. The effect on T2 and Tcp parallels the pptn. of poly(ethylene oxide) from aq. soln. in the presence of salts and follows the Hofmeister series. Multivalent anions reduce T2 to a much greater extent than T1, and this results in a loss of gel formation above a certain 'no-gel' salt concn.

ST gelation Pluronic F127 salt; phase transition Pluronic F127 salt

IT **Gelation**
Gels (drug delivery systems)
Micelles
Phase transition temperature
(loss of **gelation** ability of Pluronic F127 in salts presence)

IT Salts, biological studies
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(loss of **gelation** ability of Pluronic F127 in salts presence)

IT **106392-12-5**, Pluronic F127
RL: PEP (Physical, engineering or chemical process); **PRP (Properties)**; **THU (Therapeutic use)**; BIOL (Biological study); PROC (Process); USES (Uses)
(loss of **gelation** ability of Pluronic F127 in salts presence)

IT 7487-88-9, Sulfuric acid magnesium salt (1:1), biological studies 7601-54-9, Sodium phosphate 7647-14-5, Sodium chloride (NaCl), biological studies 7757-82-6, Sulfuric acid disodium salt, biological studies 10043-01-3 10043-52-4, Calcium chloride (CaCl2), biological studies
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(loss of **gelation** ability of Pluronic F127 in salts presence)

L30 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1996:561277 HCAPLUS
DN 125:230638
TI Topical **gel** formulations of epidermal growth factor and their wound healing effects
AU Yi, Jung Woo; Kim, Hee Jun; Cho, Seong Wan; Park, Jun Sang; Choi, Young Wook
CS Coll. Pharm., Chung-Ang Univ., Seoul, 156-756, S. Korea
SO Yakhak Hoechi (1996), 40(4), 411-417
CODEN: YAHOA3; ISSN: 0513-4234
DT Journal
LA Korean
CC 63-6 (**Pharmaceuticals**)
AB Epidermal growth factor (EGF), a potential healing agent for wounds and burns, has been formulated to topical gels with the hydrophilic polymer carbopol 934P. Physicochem. characteristics of the aq. gels were evaluated by rheol. properties and pH changes on storage. The gels were relatively stable at 4.degree.C and room temp. showing no change sin pH for two weeks, and revealed the rheogram of shear thinning plastic flow with the yield values in the range of 40 to 70 dyne/oleaginous ointments in full-thickness wound mouse model. The gel systems resulted in better wound healing effects than the other ointments. Furthermore, liposomal Carbopol gel has been developed by the addn. of EGF-contg. liposomal suspension into the Carbopol gel. The enhanced wound healing effects have been obsd. in the liposomal gel system, compared to the other gels and conventional ointments.

ST topical gel epidermal growth factor; wound healing epidermal growth factor gel

IT Wound healing promoters
(topical gel formulations of epidermal growth factor and their wound healing effects)

IT **Pharmaceutical** dosage forms
(gels, topical; topical gel formulations of epidermal growth factor and their wound healing effects)

IT **Pharmaceutical** dosage forms
(liposomes, topical gel formulations of epidermal growth factor and

their wound healing effects)
IT **Pharmaceutical** dosage forms
(ointments, topical gel formulations of epidermal growth factor and their wound healing effects)
IT 62229-50-9, Epidermal growth factor
RL: BAC (Biological activity or effector, except adverse); PEP (Physical, engineering or chemical process); **THU (Therapeutic use)**; BIOL (Biological study); PROC (Process); USES (Uses)
(topical gel formulations of epidermal growth factor and their wound healing effects)
IT **57916-92-4**, Carbopol 934P
RL: MOA (Modifier or additive use); **PRP (Properties)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(topical **gel** formulations of epidermal growth factor and their wound healing effects)

L30 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1996:357356 HCAPLUS
DN 125:95777
TI Novel peroral dosage forms with protease inhibitory activities. I. Design of capsules with fast **gel**-forming and fast drug-releasing **properties**
AU Akiyama, Yohko; Luessen, Henrik L.; de Boer, Albert G.; Verhoef, J. Coos; Junginger, Hans E.
CS DDS Research Laboratories, Takeda Chemical Industries, Ltd., Yodogawa-ku 532, Osaka, Japan
SO Int. J. Pharm. (1996), 136(1,2), 155-163
CODEN: IJPHDE; ISSN: 0378-5173
DT Journal
LA English
CC 63-5 (**Pharmaceuticals**)
Section cross-reference(s): 1
AB Capsules, contg. the poly(acrylic acid) deriv. Carbopol 934P (C934P) with the aim of inhibiting intestinal proteolytic activities after swelling with water into a hydrated state, were designed. Erythrosin was used as a hydrophilic model drug to characterize the release properties of the dosage forms. Capsule formulations which rapidly disintegrated and released the drug quickly, were prepd. because both rapid disintegration and rapid swelling of C934P and simultaneous drug release are prerequisites for the enzyme inactivating properties of the system. The capsules contg. freeze-dried, neutralized C934P (FNaC934P) disintegrated quicker than the capsules contg. C934P. Capsules which contained poly(glycerol ester of fatty acid) microparticles with FNaC934P released erythrosin quicker than capsules contg. mixts. of FNaC934P, erythrosin and a disintegrant.
ST polyacrylate capsule protease inhibitor intestine; peptide protein oral delivery polyacrylate capsule
IT Intestine
Swelling, physical
(polyacrylate capsules for inhibition of intestinal proteases with fast gel-forming and fast drug-releasing properties)
IT Peptides, biological studies
Proteins, biological studies
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(polyacrylate capsules for inhibition of intestinal proteases with fast gel-forming and fast drug-releasing properties)
IT **Pharmaceutical** dosage forms
(capsules, polyacrylate capsules for inhibition of intestinal proteases with fast gel-forming and fast drug-releasing properties)
IT **Pharmaceutical** dosage forms
(microparticles, capsules contg.; polyacrylate capsules for inhibition of intestinal proteases with fast gel-forming and fast drug-releasing properties)
IT **Pharmaceutical** dosage forms

(oral, for peptide and protein drugs; polyacrylate capsules for inhibition of intestinal proteases with fast gel-forming and fast drug-releasing properties)

IT 9001-92-7, Protease
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; polyacrylate capsules for inhibition of intestinal proteases with fast gel-forming and fast drug-releasing properties)

IT 16423-68-0, Erythrosin
RL: PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(model drug; polyacrylate capsules for inhibition of intestinal proteases with fast gel-forming and fast drug-releasing properties)

IT **57916-92-4**, Carbopol 934P
RL: **PRP (Properties)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(polyacrylate capsules for inhibition of intestinal proteases with fast **gel**-forming and fast drug-releasing **properties**)

IT 9063-38-1, Explotab 68004-11-5, Tetraglycerol monostearate 74811-65-7, Primellose 76633-00-6, Kollidon CL 99570-00-0, Tetraglycerol pentastearate 102640-11-9, Carbopol 934P, sodium salt 157175-97-8
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(polyacrylate capsules for inhibition of intestinal proteases with fast gel-forming and fast drug-releasing properties)

L30 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1996:127793 HCAPLUS
DN 124:211811
TI The effects of aging on the rheological, dielectric and mucoadhesive **properties** of poly(acrylic acid) **gel** systems
AU Tamburic, Slobodanka; Craig, Duncan Q. M.
CS Sch. Pharmacy, Univ. London, London, WC1N 1AX, UK
SO Pharm. Res. (1996), 13(2), 279-83
CODEN: PHREEB; ISSN: 0724-8741
DT Journal
LA English
CC 63-5 (**Pharmaceuticals**)
AB The purpose of this study was to investigate the effects of storage on the phys. properties of a series of poly(acrylic acid) (PAA) hydrogels, using 2 dynamic techniques, oscillatory rheol. and dielec. spectroscopy. Furthermore, the effects of ageing on the mucoadhesive properties were evaluated and related to the changes in structure. Three carbomers (Carbopol 934P, 974P and EX-214) and polycarbophil (Noveon AA-1) were formulated as hydrogels with a range of neutralizing agents (NaOH, triethanolamine and tromethamine). The effects of storage for 6 mo on the gel structure were measured using oscillatory rheol. and low frequency dielec. anal. Mucoadhesive performance was studied by means of a detachment force test. A substantial decrease in the rheol. storage moduli was noted for all samples, while the tan .delta. values remained unchanged for the majority of systems. Dielec. studies revealed that gels neutralized with triethanolamine showed a greater degree of binding of neutralizing ions to the gel network than did the other 2 agents. It was also found by the dielec. anal. that, on storage, the distribution of ions within the gel systems changed. This may be due to the neutralizing ions being released from the gel network into the bulk aq. phase, thereby contributing to the decrease in rheol. storage modulus. Mucoadhesion studies indicated that, despite the substantial changes in gel structure, there was no alteration in the bioadhesive force of detachment for the majority of systems during a 6-mo period. A redistribution of cations between the polymer cluster and the bulk of medium is proposed as an possible addnl. mechanism of ageing of PAA hydrogels. The results obtained support the hypothesis outlined previously that the mucoadhesive strength is related to the tan .delta. value rather than the viscosity of the gel.
ST polyacrylate hydrogel property aging; mucoadhesion polyacrylate hydrogel;

rheol polyacrylate hydrogel; dielec property polyacrylate hydrogel
IT **Pharmaceutical** dosage forms
(hydrogels, aging effects on rheol. and dielec. and mucoadhesive properties of poly(acrylic acid) gel systems)
IT 77-86-1, Tromethamine 102-71-6, Triethanolamine, miscellaneous
RL: MSC (Miscellaneous)
(aging effects on rheol. and dielec. and mucoadhesive properties of poly(acrylic acid) gel systems)
IT 9003-01-4, Poly(acrylic acid) 9003-97-8, Noveon AA-1 **57916-92-4**, Carbopol 934P 151687-96-6, Carbopol 974P 172451-67-1, Carbopol EX-214
RL: **PRP (Properties)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(aging effects on rheol. and dielec. and mucoadhesive **properties** of poly(acrylic acid) **gel** systems)

L30 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1995:949699 HCAPLUS
DN 124:66371
TI An investigation into the rheological, dielectric and mucoadhesive **properties** of poly(acrylic acid) **gel** systems
AU Tamburic, Slobodanka; Craig, Duncan Q. M.
CS Centre for Materials Science, School of Pharmacy, University of London, 29-39 Brunswick Square, London, WC1N 1AX, UK
SO J. Controlled Release (1995), 37(1-2), 59-68
CODEN: JCREEC; ISSN: 0168-3659
DT Journal
LA English
CC 63-5 (**Pharmaceuticals**)
Section cross-reference(s): 36
AB A range of recently introduced poly(acrylic acid) polymers (Carbopols 974P, 934P and EX-214, Noveon AA-1) have been prepd. as 2.5% wt./wt. gels in water using three different neutralizing agents; sodium hydroxide, triethanolamine (TEA) and tromethamine (Tris). The structures of the gels were characterized in comparison to un-neutralized systems using oscillatory rheol. and low frequency dielec. spectroscopy. Rheol. evaluation indicated that the elastic moduli of the gels decreased in the rank order Carbopol 934P, 974P, Noveon AA-1 and Carbopol EX-214, with the reverse order being obsd. for the tan .vdelta. values. The effects of changing the neutralizing agent were less marked. The dielec. responses showed differences between the various polymers and also between the same polymer with different neutralizing agents. In particular, samples neutralized with TEA consistently showed a greater low frequency conductance than gels neutralized with the other agents. This effect was assocd. with charges being more closely bound into the polymer network in the TEA neutralized gels. It was also noted that the rheol. and dielec. behavior of NaOH neutralized Carbopol 974P was markedly different to that of Carbopol EX-214, despite the supposed equivalence of these two materials. The mucoadhesive properties of the various gels were compared using a force of detachment test. It was shown that Carbopols 934P and 974P showed the greatest mucoadhesive strength, with smaller differences being noted between systems contg. the various neutralizing agents. A correlation between mucoadhesive strength and rheol. tan .vdelta. values was obsd.
ST polyacrylate rheol dielec property mucoadhesion
IT Mucous membrane
Pharmaceutical dosage forms
Rheology
(rheol., dielec. and mucoadhesive properties of poly(acrylic acid) gel systems)
IT Adhesion
(bio-, rheol., dielec. and mucoadhesive properties of poly(acrylic acid) gel systems)
IT Electric activity

(conductance, rheol., dielec. and mucoadhesive properties of poly(acrylic acid) gel systems)

IT 77-86-1 102-71-6, uses 1310-73-2, Sodium hydroxide, uses
RL: NUU (Nonbiological use, unclassified); USES (Uses)
(neutralizing agent; rheol., dielec. and mucoadhesive properties of poly(acrylic acid) gel systems)

IT 9003-01-4, Poly(acrylic acid) 9003-97-8, Noveon AA-1 **57916-92-4**, Carbopol 934P 151687-96-6, Carbopol 974P 172451-67-1, Carbopol EX 214
RL: **PRP (Properties)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(rheol., dielec. and mucoadhesive **properties** of poly(acrylic acid) **gel** systems)

L30 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1995:335239 HCAPLUS
DN 122:136572
TI Mixtures of **gelling** agarose with nonionic surfactants or block copolymers: clouding and diffusion **properties**
AU Penders, M. H. G. M.; Nilsson, S.; Piculell, L.; Lindman, B.
CS Physical Chemistry 1 Chemical Center, University of Lund, Lund, 22100, Swed.
SO Prog. Colloid Polym. Sci. (1994), 97(Trends in Colloid and Interface Science VIII), 110-15
CODEN: PCPSD7; ISSN: 0340-255X
DT Journal
LA English
CC 44-6 (Industrial Carbohydrates)
Section cross-reference(s): 46
AB The clouding and diffusion behavior of nonionic micellar systems of dodecyl hexaoxyethylene (C12E6) and dodecyl octaoxyethylene (C12E8) glycol monoethers and a triblock copolymer of compn. E13PO30EO13 (PE6400) were investigated in agarose (I) gels and solns., with and without NaSCN. In the presence of I, the clouding temp. of the nonionic surfactant decreased upon cooling, and a hysteresis behavior was obsd. However, the gelation temp. of I remained practically unchanged upon the addn. of surfactant; also, the diffusion of the surfactant was decreased because of obstruction caused by the polymer.
ST agarose mixt block copolymer surfactant; nonionic surfactant mixt gelling agarose; clouding diffusion micelle system agarose
IT Diffusion
Micelles
Surfactants
(clouding and diffusion properties of mixts. of gelling agarose with nonionic surfactants or block copolymers)
IT 333-20-0, Potassium thiocyanate
RL: MOA (Modifier or additive use); USES (Uses)
(clouding and diffusion properties of mixts. of gelling agarose with nonionic surfactants or block copolymers)
IT 3055-96-7, Dodecyl hexaoxyethylene glycol monoether 3055-98-9 9012-36-6, Agarose **106392-12-5**, Ethylene oxide-propylene oxide block copolymer
RL: **PRP (Properties)**
(clouding and diffusion **properties** of mixts. of **gelling** agarose with nonionic surfactants or block copolymers)

L30 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1994:417913 HCAPLUS
DN 121:17913
TI **Gelatin gels** and polyoxyethylene-polyoxypropylene **gels**: comparative study of their **properties**
AU Guzman, M.; Aberturas, M. R.; Garcia, F.; Molpeceres, J.
CS Fac. Farm., Univ. Alcala de Henares, Alcala de Henares, 28871, Spain
SO Drug Dev. Ind. Pharm. (1994), 20(12), 2041-8

CODEN: DDIPD8; ISSN: 0363-9045
DT Journal
LA English
CC 63-5 (Pharmaceuticals)
AB Gelatin gels and polyoxyethylene-polyoxypropylene (Pluronic) F-108 and F-127 gels were prepd. at concns. ranging between 5 and 25% (wt./vol.), the former by dispersion at 37.degree.C, the later by dispersion at 4.degree.C. The viscosity, the gel-sol transition temp. and the "in vitro" release kinetics of these gels were compared as a first step for the elaboration of parenteral controlled release formulations. Phenolsulfonphthaleine (PR) was used as a tracer. In all cases the viscosity increased with the rise in the concn. of gelatin (20 to 264 cP for 5 to 20%) or pluronic (260 and 1520 cP for 20 and 25% F-108). The gel-sol transition temp. for gelatine gels was directly related to the concn. On the contrary, for pluronic gels on inverse relation was obsd., being the gel-sol transition temp. higher in copolymers with a large percentage of polyoxyethylene groups (30 .+-. 0.2 .degree.C for 25% F-108). In both types of gels, a rise in pH and ionic strength decreased the gel-sol transition temp., whereas PR increase this temp. The release of the tracer, from the gels to the aq. medium, showed a zero-order kinetics and the release rates were inversely proportional to the concn. of gelling agent.
ST gel gelatin polyoxyalkylene property
IT Gelatins, properties
Polyoxyalkylenes, properties
RL: BIOL (Biological study)
(gels, properties of)
IT Pharmaceutical dosage forms
(gels, gelatin and polyoxyethylenen-polyoxypropylene, properties of)
IT **106392-12-5**, Pluronic F-108
RL: BIOL (Biological study)
(**gels**, **properties** of)

L30 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1993:240563 HCAPLUS
DN 118:240563
TI Viscoelastic **properties** of polyacrylic acid **gels** in mixed solvents
AU Chu, James S.; Yu, Danny M.; Amidon, Gordon L.; Weiner, Norman D.; Goldberg, Arthur H.
CS Coll. Pharm., Univ. Michigan, Ann Arbor, MI, 49109-1065, USA
SO Pharm. Res. (1992), 9(12), 1659-63
CODEN: PHREEB; ISSN: 0724-8741
DT Journal
LA English
CC 63-5 (**Pharmaceuticals**)
Section cross-reference(s): 36
AB The viscoelastic properties of Carbopol 934P polymeric systems in a variety of mixts. of **pharmaceutical** solvents were studied. Carbopol 934P neutralized with a 1:1 equiv ratio of triethanolamine was dissolved in various binary or ternary solvent mixts. consisting of propylene glycol, glycerol formal, and water. Dynamic moduli G' and G'', complex viscosities, .eta.' and .eta.'', and loss tangent, tan.delta., were examd. over a frequency range of 10-3 to 10 Hz using an oscillatory viscoelastic rheometer at 30.degree.. For 0.5-1.5 wt.% neutralized Carbopol in ternary mixts., G' and G'' increased by 3-4 orders of magnitude and the phase angle decreased from 80 to 25.degree. when the water content in the solvent mixt. increased from 10 to 80 wt.%. The addn. of water to nonaq. Carbopol 934P polymer systems transforms them from low-viscosity solns. to gels with significant elastic behavior involving phys. interaction and entanglement of polymer segments with solvents.
ST viscoelasticity polyacrylic acid gel mixt solvent
IT Viscoelasticity

(of poly(acrylic acid) gels in mixed solvents)
IT **Pharmaceutical** dosage forms
(gels, poly(acrylic acid), viscoelastic properties of, in mixed solvents)
IT 57-55-6, Propylene glycol, properties
RL: PRP (Properties)
(systems, glycerol formal-water-, Carbopol 934P gels viscoelastic properties in)
IT 4740-78-7, 1,3-Dioxan-5-ol 5464-28-8, 1,3-Dioxolane-4-methanol
RL: BIOL (Biological study)
(systems, propylene glycol-water, Carbopol 934P viscoelastic properties in)
IT **57916-92-4**, Carbopol 934P
RL: BIOL (Biological study)
(viscoelastic **properties** of **gels** of, in mixed solvents)

L30 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1992:408940 HCAPLUS
DN 117:8940
TI Preparation and **properties** of stat-copoly(oxyethylene-oxypropylene)-block-poly(oxyethylene). 2. Micellization and **gelation properties** in aqueous solution
AU Deng, Yulin; Ding, Jifeng; Stubbersfield, Rita B.; Heatley, Frank; Attwood, David; Price, Colin; Booth, Colin
CS Manchester Polym. Cent., Univ. Manchester, Manchester, M13 9PL, UK
SO Polymer (1992), 33(9), 1963-7
CODEN: POLMAG; ISSN: 0032-3861
DT Journal
LA English
CC 36-7 (Physical Properties of Synthetic High Polymers)
AB Aq. solns. of a range of diblock copolymers with one statistical (stat)-oxyethylene-oxypropylene block copolymer and one poly(oxyethylene) block were investigated by a variety of techniques, including light scattering, photon correlation spectroscopy, surface tension, and electron microscopy. Crit. micelle concns. and temps. were detd. and ests. made of micellar size and shape. The thermodn. micellization functions were derived, and comparison made with those of a diblock oxyethylene-oxypropylene copolymer. Thermally reversible gelation was noted, as were solubilization effects. The compn. of the statistical block was of major importance in detg. the hydrophobicity of a copolymer, and thereby its micellization and gelation properties.
ST block polyoxyalkylene aq micellization gelation; oxyethylene oxypropylene diblock copolymer micellization; thermodn micellization block polyoxyalkylene soln
IT Chains, chemical
(compn. of, of diblock oxyethylene-oxypropylene copolymers, micellization and gelation in aq. soln. in relation to)
IT Micelles
(formation and crit. concn. of, of diblock oxyethylene-oxypropylene copolymers in aq. soln., compn. effect on)
IT Heat of micellization
(of diblock oxyethylene-oxypropylene copolymers in aq. soln., compn. effect on)
IT Surface tension
(of diblock oxyethylene-oxypropylene copolymers, compn. effect on, micellization in aq. soln. in relation to)
IT Entropy
Free energy
(of micellization, of diblock oxyethylene-oxypropylene copolymers in aq. soln., compn. effect on)
IT Polyoxyalkylenes, properties
RL: PRP (Properties)
(block, diblock, micellization and gelation of, in aq. soln., compn.

effect on)
IT Molecular structure-property relationship
(micellization, of diblock oxyethylene-oxypropylene copolymers, aq. soln.)
IT Gelation
(thermally reversible, of diblock oxyethylene-oxypropylene copolymers, aq. soln., compn. effect on)
IT **106392-12-5**, Ethylene oxide-propylene oxide block copolymer
RL: **PRP (Properties)**
(diblock, micellization and **gelation** of, in aq. soln., compn. effect on)

L30 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1991:450845 HCAPLUS
DN 115:50845
TI Kinetics of sol-to-**gel** transition for Poloxamer polyols
AU Wang, P.; Johnston, T. P.
CS Coll. Pharm., Univ. Illinois, Chicago, IL, 60612, USA
SO J. Appl. Polym. Sci. (1991), 43(2), 283-92
CODEN: JAPNAB; ISSN: 0021-8995
DT Journal
LA English
CC 36-7 (Physical Properties of Synthetic High Polymers)
Section cross-reference(s): **63**
AB Kinetics of gelation for aq. solns. of Poloxamers 407 and 288 are detd. using pulse shearometry. The concn. of polymer required to achieve approx. the same gelation temp. for Poloxamers having a similar poly(oxypropylene)-poly(oxyethylene) unit ratio decreases with increasing mol. wt. of the poly(oxypropylene) hydrophobe contained in the copolymer. Results of these preliminary studies suggest that the gelation process was significantly more rapid for Poloxamer 407 at a 30% concn. compared to a 30% soln. of Poloxamer 288 when the polymer solns. were allowed to passively warm at room temp. It appears that the rate of gelation for the Poloxamer solns. depends on the rate of heat transfer through the polymer soln. Implications for sustained drug release are discussed.
ST polyoxyalkylene gelation kinetics; sol gel transition polyoxyalkylene; drug release sustained gelation
IT **Gelation**
(kinetics of, of aq. block ethylene oxide-propylene oxide block copolymers)
IT Heat of **gelation**
(of aq. block ethylene oxide-propylene oxide block copolymers, kinetics in relation to)
IT Polyoxyalkylenes, properties
RL: PRP (Properties)
(block, **gelation** kinetics of aq. Poloxamer, polymer compn. effect on)
IT **Pharmaceutical** dosage forms
(sustained-release, kinetics of **gelation** of aq. block ethylene oxide-propylene oxide block copolymers in relation to)
IT **106392-12-5**, Poloxamer
RL: **PRP (Properties)**
(**gelation** kinetics of aq., polymer compn. effect on)

L30 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 1999 ACS
AN 1988:62320 HCAPLUS
DN 108:62320
TI Thermally reversible **gelation** characteristics. Poly(oxyethylene)-poly(oxypropylene) block copolymer in aqueous solution after exposure to high-energy irradiation
AU Attwood, D.; Tait, C. J.; Collett, J. H.
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SO ACS Symp. Ser. (1987), 348(Controlled Release Technol.: Pharm. Appl.), 128-38

CODEN: ACSMC8; ISSN: 0097-6156
DT Journal
LA English
CC 63-5 (**Pharmaceuticals**)
Section cross-reference(s): 36
AB .gamma.-Irradn. affects the micellar properties and gelation characteristics of the poly(oxyethylene)-poly-(oxypropylene) block copolymer, Pluronic F127, in aq. soln. Irradn. caused a progressive increase of hydration of the poly(oxyethylene) chains of the poloxamer micelles in solns. at 40.degree. but no change in the no. of monomers per micelle. Exposure to irradn. induced gelation of the poloxamer solns. at a lower concn. than in nonirradiated systems. Increase of temp. of irradiated solns. over the range 25-40.degree. caused an increase of aggregation no. and a concomitant decrease of micellar hydration. In concd. solns. such changes resulted in the formation of thermally reversible gels.
ST Poloxamer micelle property gelation; gamma irradn Poloxamer gelation
IT Diffusion
Particle size
(of Pluronic F127 micelles, .gamma.-irradn. effect on)
IT Micelles
(of Pluronic F127, properties of, .gamma.-irradn. effect on)
IT **Gelation**
(of Pluronic F127, .gamma.-irradn. effect on)
IT Gamma ray, chemical and physical effects
(on **gelation** and micellar properties of Pluronic F127)
IT **Pharmaceutical** dosage forms
(controlled-release, Pluronic F127 for, **gelation** and micellar properties of, .gamma.-irradn. effect on)
IT **106392-12-5**, Pluronic F127
RL: BIOL (Biological study)
(**gelation** and micellar **properties** of, .gamma.-irradn. effect on)